

## CLAIMS

What is claimed is:

1. A transfer molding apparatus comprising:  
first and second members configured to be assembled with one another;  
at least one cavity formed in at least one of said first and second members, said at least one cavity  
extending longitudinally in a non-horizontal orientation;  
at least one gate at a lower portion of said at least one cavity; and  
at least one vent at an upper portion of said at least one cavity.
2. The apparatus according to claim 1, wherein said at least one cavity comprises a substantially vertically oriented cavity.
3. The apparatus according to claim 1, wherein said at least one cavity includes at least one surface with recesses formed therein, said recesses configured to at least partially receive conductive structures protruding from a substrate positionable in said at least one cavity.
4. The apparatus according to claim 1, wherein said at least one cavity includes at least one surface with protrusions sized and configured to be disposed against contact pads of a substrate positionable in said at least one cavity.
5. A transfer molding apparatus comprising:  
first and second members to be assembled with one another;  
at least one cavity formed in at least one of said first and second members, said at least one cavity  
extending longitudinally in a substantially vertical orientation;  
at least one gate at a lower portion of said at least one cavity; and  
at least one vent at an upper portion of said at least one cavity.

6. The apparatus according to claim 5, wherein said at least one cavity is configured to provide a substantially vertical flow for encapsulation of a substrate positionable in said at least one cavity.

7. The apparatus according to claim 5, wherein said at least one cavity includes at least one surface with recesses formed therein, said recesses including portions configured to receive conductive structures protruding from a substrate positionable in said at least one cavity.

8. The apparatus according to claim 5, wherein said at least one cavity includes at least one surface with protrusions sized and configured to engage portions of contact pads of a substrate positionable in said at least one cavity.

9. A transfer molding apparatus for molding a substrate in a substantially vertical orientation, the apparatus comprising:  
a first member and a second member configured to be assembled with one another, each of said first member and said second member having an inside surface and an outside surface;  
multiple cavities each formed in said inside surface of at least one of said first member and said second member, each of said multiple cavities sized and configured for the substrate to be disposed therein, said multiple cavities extending longitudinally in a non-horizontal orientation;  
at least one gate formed in any one of said first member and said second member extending from a lower portion of each of said multiple cavities; and  
at least one vent formed in any one of said first member and said second member extending from an upper portion of each of said multiple cavities.

10. The transfer molding apparatus of claim 9, wherein each of said multiple cavities comprises a substantially vertically oriented cavity.

11. The transfer molding apparatus of claim 9, wherein each of said multiple cavities include a longitudinal length substantially oriented along a substantially vertical orientation.

12. The transfer molding apparatus of claim 9, wherein at least one of said multiple cavities includes recesses formed in said inside surface on said at least one of said first member and said second member, said recesses sized and configured to at least partially receive conductive structures protruding from the substrate positionable in said at least one of said multiple cavities.

13. The transfer molding apparatus of claim 9, wherein at least one of said multiple cavities includes protrusions formed on said inside surface of at least one of said first member and said second member, said protrusions sized and configured to be disposed against contact pads of the substrate positionable in said at least one of said multiple cavities.

14. The transfer molding apparatus of claim 9, wherein at least one of said multiple cavities includes protrusions sized and configured on said inside surface of said at least one of said first member and said second member for engaging portions of contact pads on the substrate positionable in said at least one of said multiple cavities.

15. The transfer molding apparatus of claim 9, wherein said multiple cavities are configured and longitudinally oriented to provide a substantially vertical flow for encapsulation of the substrate positionable in said multiple cavities.